## CH. 9 – Medication Errors and Risk Reduction

* *To Err is Human*
* **Defining Medication Errors** (9.1)
  + Medication error = any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the HCP, patient, or consumer. – NCC MERP
    - Any error that occurs in the medication administration process whether or not it harms the patient
      * Related to misinterpretations, miscalculations, misadministrations, handwriting misinterpretation, and misunderstanding of verbal/phone orders
  + Medication error index:
    - Category A – Circumstances or events that had potential to cause an error
    - Category B – Error that did not reach the patient (an “error of omission” does reach the patient)
    - Category C – Error that reached the patient but did not cause harm
    - Category D – Error that reached the patient and required monitoring to confirm that it resulted in no harm to the patient and/or required intervention to preclude harm
    - Category E – Error that may have contributed to or resulted in temporary harm to the patient and required intervention
    - Category F – Error that may have contributed to or resulted in temporary harm to the patient and required initial or prolonged hospitalization
    - Category G – Error that may have contributed to or resulted in permanent patient harm
    - Category H – Error that required intervention necessary to sustain life that did not result in permanent patient harm
    - Category I – Error that may have contributed to or resulted in patient death
* **Factors Contributing to Medication Errors** (9.2)
  + HCP Errors
    - Omitting one of the rights of drug administration (right patient, right drug, right dose, right route, right time, right documentation)
    - Failing to perform an agency system check (accuracy and appropriateness of drug orders)
    - Failing to account for patient variables (age, body size, impaired organ systems)
    - Giving medications based on verbal/phone orders, which may be misinterpreted or go undocumented.
      * Nurses should remind the prescriber that orders must be in writing before the drug can be administered
      * *(Next best thing – Dr. gives an order over the phone, then comes and signs it after the fact)*
    - Giving medications based on incomplete/illegible orders
      * Orders also should not contain confusing abbreviations!
    - Practicing under stress
      * Increased number of errors with increased stress level of nurses
      * Increased rate of errors when individual nurses are assigned to the most acutely ill patients
  + Patient Errors (or their home caregivers)
    - Polypharmacy factors
      * More than 1 doctor/pharmacy without informing everyone of all medications taken
    - Not filling/refilling Rx
    - Taking medications incorrectly
      * A patient may take a medication every other day instead of daily if he/she cannot afford it
    - Taking leftover medications from a previous illness
* **The Impact of Medication Errors** (9.3)
  + *The misery of the patient will be prolonged*
  + Medication errors are the most common cause of morbidity and preventable death within hospitals
  + Devastating emotional impact on the person who made the error
  + Increased costs
  + Patient inconvenience, harm, or death
  + Each error or potential for one should be investigated to identify ways to prevent future errors
    - In a nonpunitive way to encourage staff to report errors, building a culture of safety
    - In order to implement new policies/procedures to reduce/eliminate errors
* **Reporting and Documenting Medication Errors** (9.4)
  + **Goal =** Safe and effective patient care and patient medication administration
  + FDA has coordinated the reporting of medication errors at the federal level
    - MedWatch (the FDA Safety Information and Adverse Event Reporting Program)
      * Provides information about safety issues involving medical products (including drugs)
    - The FDA encourages nurses and other HCPs to report medication errors for its database, which is used to assist others in avoiding similar mistakes
    - Errors, or situations that can lead to errors, can be reported anonymously directly to the FDA by telephone or online
      * Since 1992, they have received over 30,000 error reports
  + National Coordinating Council for Medication Error Reporting (NCC MERP)
    - Goal to standardize the medication error reporting system, examine interdisciplinary causes of errors, and promote safety
    - They also provide medication error prevention education
  + Documentation is essential for legal reasons, so do it right…
  + Root Cause Analysis (RCA)
    - What happened, why did it happen, and what can be done to prevent it from happening again?
  + **Documenting in the Patient’s Medical Record**
    - Errors should be documented in a factual manner
    - Documentation should include nursing interventions that were implemented to protect the patient, such as monitoring VS and assessing for potential complications
      * Failure to report these implies either negligence or lack of acknowledgement that an error occurred.
    - The medication administration record (MAR) should contain documentation of errors as well.
  + **Reporting the Error**
    - The nurse making or observing the error should complete an Incident Report
    - This allows the nurse to identify factors that contributed to the medication error, which is helpful in avoiding future errors
    - This is not included in the patient’s medical record – it’s used by the agency’s risk management personnel (i.e. – for implementing RCA), and for nursing administration/education
  + **Sentinel Events**
    - Sentinel event = unexpected occurrence involving death or serious physical or psychological injury, or risk thereof – JC
    - These are always investigated and interventions put in place to ensure that such an event does not recur (using RCA).
* **Strategies for Reducing Medication Errors** (9.5)
  + *Medication errors are preventable*
  + Assessment
    - Ask patient about allergies, health concerns, use of OTC meds/supplements
    - Ensure the patient has been receiving the right dose of meds, at the right time, by the right route.
    - Assess organ function that could affect pharmacotherapy
    - Identify patient education needs regarding medications
  + Planning
    - Avoid use of abbreviations/mnemonics
    - Question unclear orders
    - Do not accept verbal orders
    - Follow policy and procedure
    - Have patient restate dosing directions, including the correct dose and time
    - Ask patient to demonstrate an understanding of the goals of therapy
  + Implementation
    - PAY ATTENTION
    - Practice the rights (patient, route, time, drug, dose, *documentation*)
    - Follow the following steps:
      * Positively ID the patient using 2 means
      * Use correct procedures & techniques for all routes
      * Calculate the dose correctly; measure liquids carefully
        + DOUBLE CHECK; have another nurse or pharmacist check
      * Open meds immediately prior to administration and in the presence of the patient
      * Record on MAR immediately
      * Confirm the patient has swallowed the meds
      * Do not crush long-acting oral meds and tell patient not to
  + Evaluation
    - Determine if therapeutic effects (i.e. – normal BP after receiving antihypertensives) or adverse effects have occurred.
  + **Fatal errors**
    - Most common is improper dose
    - Followed by wrong drug and wrong route
    - Almost half occurred in patients >60
    - Children are also vulnerable
  + Always know drug standard before administering (that way, when an MD writes 500mg instead of 50mg, you can catch the error)
    - NEVER give a drug you are unfamiliar with (both uses and side effects)
* **Medication Reconciliation** (9.6)
  + = the process of keeping track of a patient’s medications as they proceed from one HCP to another
    - In an effort to reduce duplication, omissions, dosing errors, or drug interactions.
    - Avoid polypharmacy, which can be a cause of medication errors (esp. in older adults)
  + Admission and discharge are the most likely places that medication reconciliation errors have been found to occur
    - Hospitals now encouraged to document a complete list of current meds upon admission
    - This list should then be communicated to the next provider responsible for care
    - At discharge, patients should be provided with a complete list of meds and instructions
* **Providing Patient Education for Medication Uses** (9.7)
  + This is an essential strategy for avoiding errors
  + The nurse should teach:
    - Names of all medications, uses, doses, and when/how to take them
    - Side effects that need to be reported immediately
    - Label-reading before administration, and using the measuring device that comes with liquid meds
    - Carrying a list of ALL meds, and use only 1 pharmacy if possible
    - Asking questions
* **How Health Care Facilities Are Reducing Medication Errors** (9.8)
  + Automated, computerized lock cabinets
  + Risk-Management Departments
  + Effective Policies and Procedures
    - Correctly storing medication
    - Reading the drug label expiration date
    - Avoid transferring doses from one container to another
    - Avoid overstocking to prevent expiration
    - Monitor compliance with prohibited abbreviations
    - Remove outdated reference books
* **Governmental and Other Agencies that Track Medication Errors** (9.9)
  + FDA’s MedWatch – safety info and adverse event reporting program
  + ISMP – Institute of Safe Medication Practice – accepts error reports, publishes *Safe Medicine* newsletter about errors
  + The USP’s MEDMARX – anonymous error-reporting system